

DRAFT**Amendments to the Specification**

On page 41, please replace the Abstract with the following replacement Abstract:

ABSTRACT OF THE INVENTION

~~The present invention relates to a novel tissue culture system that provides A~~
method is provided for the long term culture of proliferating hepatocytes that retain hepatic
function to produce a hepatic cell culture. ~~Disclosed are methods and compositions for ex vivo~~
~~culturing of Hepatocytes and nonparenchymal cells~~ are co-cultured ex vivo on a matrix coated
with a molecule that promotes cell adhesion, proliferation or survival, in the presence of growth
factors, resulting in a long-term culture of proliferating hepatocytes that retain hepatic function.
The co-culturing method results in the formation of matrix/hepatic cell clusters that may be
mixed with a second structured or scaffold matrix that provides a three-dimensional structural
support to form structures analogous to liver tissue counterparts. ~~The hepatic cell culture system~~
method can be used to form bio-artificial livers through which a subjects blood is perfused. In an
embodiment, the hepatocytes and nonparenchymal cells are derived from disaggregated liver
tissue and are co-cultured in the presence of epidermal growth factor or hepatocyte growth factor
and beads coated with extracellular matrix protein. Alternatively, the ~~novel~~ hepatic cell culture
~~system~~ may be implanted into the body of a recipient host having a hepatic disorder. Such
hepatic disorders, include, for example, cirrhosis of the liver, induced hepatitis, chronic hepatitis,
primary sclerosing cholangitis and alpha₁ antitrypsin deficiency.